The influence of hedonic motivation, self-efficacy, trust and habit on adoption of internet banking: a case of developing country

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Abstract: The purpose of this study is to analyse the untouched dimensions of internet banking acceptance by following a more comprehensive approach to address internet banking intention adoption. CFA and SEM analyses have been used to analyse the data collected from university students. The study strives to examine the role of hedonic motivation, self-efficacy, trust, habit and behavioural intention variables in predicting individuals’ adoption of internet banking. The empirical findings established the significant and positive contribution of hedonic motivation (HM) on trust (T). Along with this, hedonic motivation (HM), trust (T), self-efficacy (SE) and habit (H) showed a positive and significant impact on behavioural intention (BI). Finally, results revealed that habit (H) and behavioural intention (BI) have a significant and positive impact on the user’s intention to adopt internet banking (I). Therefore, it can be recommended that banks need to improve their customers’ skills with respect to internet banking usage. Furthermore, the banks should change their internet banking screens and should switch to more innovative interface in order to attract customers towards internet banking. The present study provided an all-inclusive approach by incorporating existing literature on internet banking which emphasises greatly on the perception aspects of technology and hardly studies the impact of these variables.

Keywords: hedonic motivation; Pakistan; self-efficacy and internet banking; trust.


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1 Introduction

Recently, technology has shown a trend in the success of today’s business. This acknowledgement has not only encouraged the industry competitions, but also forced businesses to adopt similar tactics in performing business operations (Chau and Lai, 2003). The increasing use of technology in banking sector allows banks to enhance customer satisfaction, boost retention and augment earnings (Manzano et al., 2011; Durken and O’ Donnell, 2005; Kim and Prabhakar, 2004; Raza et al., 2015). By the passage of time, the development of the Wi-Fi technologies and internet, Internet Banking (IB) has become a vital part of the banking logistic system to deliver an appropriate solution to satisfy the increasing demand of customer for financial services (Curran and Meuter, 2007). The internet facilitates the customer with the extensive range of financial services (that is paying bills, fund transfer, balance inquiries, etc.), at a time and high quality of services and place proper to customers (Liao et al., 1999). The quick extent of such services could be indorsed to their feasibility rather than to traditional banking channels. Indeed, internet banking is measured the minimum costly banking channel compared with any different bank channels, i.e. Telebanking, ATM and traditional branches (DeYoung et al., 2007; Kolodinsky et al., 2004; Hall et al., 1999; Cuevas, 1998). Moreover, Internet Banking can deliver great supervision perception in developing operational strategies that will allow banks to remain competitive and hold their market (Rawashdeh, 2015).

Internet banking (IB) is the most efficient and vital form of online businesses. The quick flow of the internet has fundamentally transformed the supply channels used by the financial services industry (Al-Ajam and Nor, 2015). Furthermore, Kesseven et al. (2008) describe internet banking as a system which offers people to execute banking activities at home, via the internet. It allows individuals and organisations to access bank services without the mere dependence over the bank’s physical location or premises.

The emergent popularity of IB has played a major role in the success and growth process of banking sector around the world (Xu et al., 2009). The advancements in
banking sector not only boost the financial institutions of a country, but also strengthen the economy. IB is now used as the key term for the new era of the banking system (Lee and Allaway, 2002). Internet banking offers various services that benefit the end users. Some of the vital advantages of utilising IB involve online payment, balance inquiry, payments of utility bills, 24/7 online funds transfer, ticket booking, online shopping, prepaid mobile recharge, etc. (Daniel, 1999; Sathye, 1999; Mols, 1998). The success of internet banking not only benefits the banks in attaining higher efficiency and improved productivity, but also benefits the end users in providing rapid access to information and enhancing customer comfort.

At the end of 1990s numerous banks have begun to view web-based banking as a planned imperative (Cronin, 1998). This adoption of innovative financial technology in recent banking like Automated Teller Machines (ATM) with innovative financial products such as car financing schemes, debit card, platinum card and credit cards and computerisation of bank branches, etc. has conveyed several prospects in banking and finance region of countries around the globe.

1.1 Internet banking in Pakistan

Internet banking in Pakistan is in its primary stages. There are total 38 scheduled banks in the country controlled by State Bank of Pakistan (SBP) Review for the quarter ended October–December 2013. The proprietorship of these banks is considered as private sector banks, public sector banks and specialised banks. In total 24 banks of the country deal with internet banking. These banks contain four percent volume share of total e-banking transactions of the banking sector in Pakistan.

SBP’s Payment Systems Review for the quarter ended October–December 2013 has reported 3.9 million transactions by over a million registered users of internet banking. This shows the volume growth of 5.7% compared to last quarter. This usage amounts Rs. 161 billion with value growth of 2.7%. Banking and finance sector of the country is also progressing to be the prominent investors of the technology of the country (Raza and Hanif, 2013; Ali and Raza, 2015; Arif et al., 2016).

The adoption of internet banking has taken healthy competition between the banking sectors of Pakistan. It has conveyed both the opportunities and challenges to the modern banking. IB has greatly assisted banks in getting cost-effectiveness and greater exposures. However, in order to achieve a competitive edge, continuous up-gradation in technology is required through innovation in product offerings and improvement in service qualities (Polatoglu and Ekin, 2001; Howcroft, 2001).

Internet banking services are connected with money transfers, cheque book requests, purchases, payments, checking account balance, transaction alerts, fund monitoring and much more. According to the customers point, accepting electronic transactions is not a simple process given their difficult and complex nature and the requirement for the end user to adjust their habits and behaviour (Curran and Meuter, 2005). Such issues have also been the most important challenge regarding the successful implementation of IB (Curran and Meuter, 2007). Therefore, there is always a necessity to identify and examine the most important factors hindering or facilitating customers’ intention and adoption of IB. However, as mentioned above, such issues of customers’ intention and adoption of IB have rarely been addressed in Pakistan. Accordingly, the aim of the current study is to identify and examine the factors that predict the behavioural intention and adoption of IB in Pakistan.
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The present research is arranged in six sections. Section 2 sets light on the literature review of user’s intention to adopt online banking mentioning theoretical background and empirical reviews and hypotheses. Section 3 comprises of the research methodology; Section 4 signifies the data analysis and results in detail; Section 5 presents discussions and implication and finally Section 6 presents limitation and future implications of the present research.

2 Review of related literature

In the literature, several studies have been conducted to analyse the role of the online banking channel, with some of the studies specifically, but looking to analyse the role of customer’s willingness to accept internet banking (Martins et al., 2014). Theoretically, several factors have been considered as important which articulate the customer willingness to use internet banking (Riffai et al., 2012; Martins et al., 2014). Along with other factors, stated performance expectation, effort expectation and social pressure are the significant factors which influence the customer’s willingness to accept internet banking (IB).

According to Curran and Meuter (2007), the expected outcomes such as efficiency and pleasure from using internet banking are the main reasons which affect the customer’s intentions to accept internet banking. Shih and Fang (2004) also found a strong association between the customer’s intentions and the usage of internet banking. Furthermore, Walker and Johnson (2006) reported that the customer’s intentions to accept IB depend on the customer’s views about their ability to operate such technology efficiently. Moreover, many studies have discussed the role of hedonic motivation in different terms, i.e. playfulness, intrinsic motivation, enjoyment in adopting internet banking usage. For instance, Riffai et al. (2012) reported that playfulness is the significant factor which affects the customer’s willingness in adopting online banking in Oman. Akhlaq and Ahmed (2013) support that intrinsic motivation creates an impact on customer trust which in turn creates a positive environment for the customers to adopt IB. However, very few studies have been conducted to examine the role of habitual behaviour on the customer’s willingness in accepting internet banking.

Furthermore, some of the studies also report the negative association between the habitual behaviour and the customer’s inclination in accepting internet banking (Wan and Che, 2004; Kuisma et al., 2007; Laukkanen et al., 2008). With respect to self-efficacy, Wang et al. (2003) confirmed that factors such as convenient to use, reliability and usefulness are controlled by self-efficacy. Al-Somali et al. (2009) also notify that factor convenient to use is affected by the self-efficacy. IB’s features such as compatibility, accessibility, difficulty are the factors which create change in the attitude of the customers to adopt the IB (Liao et al., 1999; Kolodinsky et al., 2004; Shih and Fang, 2004). However, Flavián et al. (2006), Casaló et al. (2007) and Martins et al. (2014) give attention to different customer’s factors such as a privacy issue, security threat, the risk that change the customer’s mind to adopt IB. AbouShanab et al. (2010) examined the role of customer intention to accept IB in Jordan and found that the performance expectancy, social influences, effort expectancy, trust and self-efficacy all supported this relationship.

Al-Qeisi and Abdallah (2013) also consider performance expectancy as a facilitator between the website quality and the use of IB. Al-Majali (2011) stated that customer intention to accept internet banking is affected by risk, social pressure, awareness, trust,
A case of developing country

personal norms and attitudes. Al-Smadi (2012) also supported that cultural viewpoint, and risk affects the customer’s intentions in accepting IB in Jordan; however, the role of intrinsic motivation has been ignored. In addition to this, the relationship between intrinsic motivation and trust, self-efficacy and trust has been ignored by the studies done before. Thus, this study bridges the gap and provides a conceptual framework which covers the important aspects which can affect the customer’s willingness in accepting IB. Moreover, Rawashdeh (2015) examined the impact of behavioural intention on internet banking usage in Jordan. A usable sample of 298 respondents was attain. The results of TAM model confirm the importance of behavioural intention for predicting internet banking adoption in Jordan. Moreover, Al-Ajam and Nor (2015) investigate the factor effecting on the intention to adopt internet banking in the Republic of Yemen. This study uses Theory of Reasoned action (TRA) and collected the data from 1,500 bank customers. The results of structural equation modelling recommended that attitude, subjective norm and TR is significantly impacted on customer’s behavioural intention in Yemen. 63.8 percent of the variance in the behavioural intention is explained by the all three variables. So, the current study recommended that banks should focus on designing the strategic marketing plan to attract customers.

2.1 Conceptual framework

As seen in Figure 1, the factors which are included in the suggested conceptual models are hedonic motivation (HM), habit (HT), self-efficacy (SE) and trust (TR). Venkatesh et al. (2012) confirmed that HM and HT can be used to report adoption of technology from customers’ point of view. TR and SE have been used as a key factor in previous literature related to customer willingness in the adoption of IB (Wang et al., 2003; Eriksson et al., 2005; Akhlaq and Ahmed, 2013). In addition, the role of TR and SE is very important in changing the customer’s intentions to accept IB as referred in the hypotheses but one important factor of customers’ personality i.e. self-efficacy is also added as a key predictor to analyse the customer trust and willingness to accept IB. The justification and development of hypotheses are discussed in the following subsections.

Figure 1 Conceptual framework
2.2 Habit (HT), behavioural intention (BI) and adoption (A)

According to Venkatesh et al. (2012), the habit can be defined as an act of people done repeatedly because of their knowledge. Davis and Venkatesh (2004) recognised habit as an alternative factor which affects the behavioural intention and the usage of technology. Based on empirical studies, habit is a repeated action and sometime occurred unconsciously and is shaped by experiences, knowledge, skills learned over time (Limayem et al., 2007; Venkatesh et al., 2012). However, it has been also seen that habitual behaviour creates a barrier in customer willing to use internet banking (Laukkanen et al., 2008). Moreover, this study adopted the concept of Venkatesh et al (2012) that confirmed that a positive association exists between habit, behavioural intention, and adoption. These results are also confirmed by many studies done in the same perspective (Kolodinsky et al., 2004; Eriksson et al., 2008, Roy et al., 2016). The hypotheses used in this study to represent habit are as follows:

Hypothesis 1a: Habit has a significant impact on behavioural intention.

Hypothesis 1b: Habit has a significant impact on the adoption of internet banking.

2.3 Hedonic motivation (HM), trust (T) and behavioural intention (BI)

Venkatesh et al. (2012) defined hedonic motivation as an emotion which can be of joy, happiness arouses as a result of using technology. In the context of customers, it has been observed that the intrinsic factors such as fun and enjoyment create a significant impact on the customer’s attitude towards the new technology (Dabholkar and Bagozzi, 2002; Dabholkar et al., 2003; Van der Heijden, 2004; Hwang and Kim, 2007). Theoretically, the factors of hedonic motivation are considered as the most important aspects in affecting customer’s willingness to accept internet banking (Curran and Meuter, 2007; Celik, 2008; Riffai et al., 2012). Hwang and Kim (2007) argued that the intrinsic motivation creates an impact on integrity and ability which are the two dimensions of e-trust. This means that customers who are fun loving and entertaining perceived internet banking the same way and developed trust to use online channels. The same result is also confirmed by Akhlaq and Ahmed (2013) who reported that intrinsic motivation plays an important role in enhancing customer trust in internet banking, the hypotheses for hedonic motivation are as follows:

Hypothesis 2a: Hedonic motivation has a significant impact on behavioural intention.

Hypothesis 2b: Trust has a significant impact on behavioural intention.

2.4 Trust (TR) and behavioural intention (BI)

Gefen et al. (2003) defined trust as the individual readiness to depend on another person on the basis of his belief in honesty, integrity and ability. It has been considered as an important factor which affects the customer’s willingness towards the acceptance of internet banking (Flavián et al., 2006; Akhlaq and Ahmed, 2013). Along with this, Alwan and Al-Zubi (2016) examined the impact of trust on intention to adopt internet banking in Jordanian Banks. They concluded that trust has a significant impact on intention to adopt
internet banking. In particular, the factors which can affect the intentions to use internet banking can be risk, intangibility, ambiguity and no human interaction. Moreover, customers are very choosy when it comes to trust on technology and to convince themselves to use that technology. (Gefen et al., 2003). In previous studies, many studies examined the relationship between trust and behavioural intention (Eriksson et al., 2005; Riffai et al., 2012). The hypothesis used to represent trust is as follows:

Hypothesis 3: Trust has a significant impact on behavioural intention.

2.5 Self-Efficacy (SE), Trust (T) and Behavioural Intention (BI)

Bandura (1986) defined self-efficacy as the peoples’ own judgement on their capabilities to attain certain task or achieve an objective. Moreover, self-efficacy is associated with an individual’s belief that one requires some attainments for which he designed and execute a plan of action (Bandura, 1997). In another way, if customers considered themselves capable enough to use the online banking services they will be highly motivated to adopt that channel (Wang et al., 2003). Several studies examined the role of self-efficacy on customer’s willingness to use internet banking (Walker and Johnson, 2006; AbuShanab et al., 2010; Yen et al., 2016). Moreover, self-efficacy also shapes the customer’s perceptions and views regarding the new technology (Compeau and Higgins, 1995; Wang et al., 2003; Zhou, 2012). Additionally, Chaouali et al. (2016) examine the impact of trust on intention to adopt internet banking in Tunisia. They concluded that trust is the main factor in the adoption of internet banking in Tunisia. The customers trust the internet banking if they considered themselves capable enough to use internet banking. Zhou (2012) also reported that self-efficacy plays an important role in developing customers trust in mobile banking. Thus, the hypotheses used in this study are as follows:

Hypothesis 4a: Self-efficacy has a significant impact on behavioural intention.

Hypothesis 4b: Self-efficacy has a significant impact on trust.

2.6 Behavioural Intention (BI) and Adoption (A)

The behavioural intention has been considered as an important factor in accepting the technological stream (Dwivedi and Irani, 2009). Previous studies also consider the behaviour intention as a key driver in the adoption of the internet banking (Shih and Fang, 2004; Jaruwachirathanakul and Fink, 2005; Martins et al., 2014; Kamyab and Delafrooz, 2016). The hypothesis used in this study is as follows:

Hypothesis 5: Behavioural intention has a significant impact on the adoption of internet banking.

3 Methodology

3.1 Sample and data collection

The present research utilised online questionnaire as the instrument for the study. Data were collected through random sampling. A total of 270 questionnaires were filled via the internet in summer 2015. The responses were examined for missing values and replaced
with mean. Later on, univariate and multivariate outliers are examined that resulted in 43 cases being dropped. The final count for this study was 227 cases. Moreover, the response rate of the study was 67.5% because we have distributed total 400 questionnaires from which we got total 270 questionnaires. In this study, non-probability sampling technique (convenience sampling) was applied. The valid sample size was 400 which is appropriate for the study (Raza and Hanif, 2013). According to Bank and Financial Institution Act 1989, financial institutions are responsible for non-disclosure of customers’ information (Ramayah et al., 2003; Ramayah et al., 2006). Therefore, this method is preferable for data collection due to the above restriction.

3.2 Measures

The questionnaire incorporated six variables for a study that includes the following: Internet Banking Adoption (IBA), habit (H), hedonic motivation (HM), trust (T), self-efficacy (SE) and behavioural intention (BI). The adopted questionnaire involves characteristics of these variables grounded on preceding research and is designed to Likert scale from 1 = strongly disagree to 7 = strongly agree. Questions are taken from previous researches such as hedonic motivation, habit and Behavioural intention from Venkatesh et al. (2012) which displayed the internal consistency coefficient of the measuring scale, i.e. Cronbach’s alpha of 0.921, 0.910 and 0.840, respectively. Trust is measured with the scale of six items adapted from Gefen et al. (2003) with Cronbach’s alpha of 0.890. Scale items measuring self-efficacy is adapted from the work of Compeau and Higgins (1995). The Cronbach’s alpha value of that is found to be 0.870. Finally, the measures of adoption is taken from the work of Curran and Meuter (2005, 2007). The internal consistency coefficient of the measuring scale of adoption shows the value of 0.0821.

The study has no biasness in reaching any conclusion. The identification of the respondents is taken care with caution and is not discerned in any way. The participation of the respondents is voluntary. Every participant is aware of the objective of the study. To increase the content validity, respondents were explained about the services provided in internet banking and vigilance is taken to make certain that respondents are familiar with internet banking concepts. The research is not sponsored by any public or private institution. The study followed the guideline of Dillman (1978) in the consideration of ethical measures.

4 Data analysis and results

4.1 Descriptive statistics

The data analysis was carried out through SPSS package 21 and AMOS 21 with a sample size of N = 227. The research is carried out after checking the basic data analysis assumptions of outliers, sample size, multicollinearity and scales of the variables (Fotopulos and Psomas, 2009; Hair et al., 2005). The sample size of 150 or above is considered good, in our case, the sample size in 227 exhibiting the sufficiency of sample size (Kline, 2005; Afshan and Sharif, 2016; Raza et al., 2017).

The respondent’s profile in our study is presented in Table 1. This table provides the overall description of sample respondents. In this table, 60.35% of the respondents were
males and 39.65% of the respondents were females. The majority of the respondents were graduate, that is, 68.28%, whereas 25.11% participated in our study as undergraduate and 6.61% participants of the study were postgraduate. During the data collection time, most of the respondents were between 21 and 30 years of age (73.60%), followed by 31–40 years (18.06%) and above 41 years (8.34%).

Table 1 Composition of the data

<table>
<thead>
<tr>
<th>GENDER</th>
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<tbody>
<tr>
<td>Valid</td>
<td>Male</td>
<td>137</td>
<td>60.35%</td>
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<tr>
<td></td>
<td>Female</td>
<td>90</td>
<td>39.65%</td>
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<tr>
<td>TOTAL</td>
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<tr>
<th>AGE</th>
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<tr>
<td>Valid</td>
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<td>167</td>
<td>73.60%</td>
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<tr>
<td></td>
<td>31–40</td>
<td>41</td>
<td>18.06%</td>
</tr>
<tr>
<td></td>
<td>Above 41</td>
<td>19</td>
<td>8.34%</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>227</td>
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<table>
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<th>EDUCATION</th>
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<td>Valid</td>
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<td>68.28%</td>
</tr>
<tr>
<td></td>
<td>Postgraduate</td>
<td>15</td>
<td>6.61%</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>227</td>
<td>100%</td>
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</tbody>
</table>

4.2 Testing the assumptions of multivariate analysis

The univariate outliers were omitted utilising box plot identification method. Multivariate outliers, however, are extracted using Mahalanobis D^2 criteria and were excluded from the studied sample data set. In order to deal with the problem of multicollinearity between predictors, Hair et al. (2010) established that the issue of multicollinearity exists in the study if Pearson’s r-value is above 0.90. Table 2 presents the means, standard deviations and Pearson’s correlation values. The highest Pearson’s correlation value is between hedonic motivation and habit, i.e. 0.517, which still is less than 0.9, suggesting no issue of multicollinearity among the constructs (Hair et al., 2010; Lin and Lee, 2004).

Table 2 Means, standard deviations, Pearson correlations

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>H</th>
<th>HM</th>
<th>T</th>
<th>SE</th>
<th>BI</th>
<th>A</th>
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<tbody>
<tr>
<td>H</td>
<td>4.44</td>
<td>1.08</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>HM</td>
<td>4.38</td>
<td>1.02</td>
<td>0.517**</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>T</td>
<td>4.86</td>
<td>1.12</td>
<td>0.405**</td>
<td>0.376**</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>SE</td>
<td>4.85</td>
<td>1.17</td>
<td>0.455**</td>
<td>0.472**</td>
<td>0.442**</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>BI</td>
<td>5.25</td>
<td>1.21</td>
<td>0.418**</td>
<td>0.410**</td>
<td>0.461**</td>
<td>0.434**</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>A</td>
<td>3.35</td>
<td>1.18</td>
<td>0.443**</td>
<td>0.335**</td>
<td>0.458**</td>
<td>0.414**</td>
<td>0.409**</td>
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</table>

** Correlation is significant at the 0.01 level (two-tailed)

N = 227
4.3 Common method biasness

Common method variance is defined as the “variance that is attributed to the measurement method rather than to the construct of interest” (Bagozzi and Yi, 1991). In order to deal the issue of common method biasness, we performed Harman’s one-factor model (Podsakoff et al., 2003). Applying principal axis factoring framework, Promax rotation and fixing the number of factors to 1, the results indicated that a total number of variance explained is 29.99%. Since the value is less than the threshold of 50%. It is concluded that the present study has no issue of common method biasness.

4.4 Exploratory factor analysis

The study utilised literature highly preferred principal components method (Guadagnoli and Velicer, 1988; Schoenmann, 1990; Velicer and Jackson, 1990; Steiger, 1990) in order to reduce its 25 questionnaire Likert-based items into six best manageable proposed factors. To measure the adequacy of the sample, Kaiser-Meyer-Olkin exhibits the value of 0.865 which is above 0.7 and rejecting the stance that there exist sufficient items to predict each component. In other words, the sample is sufficient enough to run factor analysis (Leech et al., 2005; Barkus et al., 2006). Bartlett’s test of sphericity (Approx. chi-square = 2403.046, df = 276, p < 0.000) describes that the correlation matrix is significantly dissimilar from the identity matrix and correlation among variables is not zero (Leech et al., 2005).

Following the criteria for factors extraction explained in Hair et al. (2009), the methods of Latent root, the percentage of variance explained and scree test together lead to the conclusion of retaining five factors for the analysis. These six components depict 69.903% of the total variance explained with Eigenvalues above 1. The rotated component matrix consists of final 24 items with factor loadings above 0.60. According to the general rule of thumb, the factor loadings above 0.55 are considered good (Tabachnick and Fidell, 2007; Raza et al., 2016). The resulting solution shown in Table 3 does not show any cross loading among the items indicating no issue of discriminant validity.

Table 3  KMO and Bartlett’s test

<table>
<thead>
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<th>Source: Authors’ estimation</th>
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<tr>
<td>Kaiser–Meyer–Olkin measure of sampling adequacy</td>
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<td>Bartlett’s test of sphericity</td>
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Table 4  Factors loading and variance explaineda

<table>
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<tr>
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<tr>
<td>$T$</td>
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<td>Eigen value</td>
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<td>% variance</td>
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## Table 4  Factors loading and variance explained\(^a\) (continued)

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<td></td>
</tr>
<tr>
<td>A2</td>
<td>0.781</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1</td>
<td>0.715</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavioural</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>intention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BI3</td>
<td></td>
<td>0.810</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BI4</td>
<td></td>
<td>0.793</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BI1</td>
<td></td>
<td>0.724</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BI2</td>
<td></td>
<td>0.623</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Habit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2</td>
<td></td>
<td></td>
<td>0.752</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1</td>
<td></td>
<td></td>
<td>0.672</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3</td>
<td></td>
<td></td>
<td>0.637</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H4</td>
<td></td>
<td></td>
<td>0.605</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedonic motivation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HM1</td>
<td></td>
<td></td>
<td></td>
<td>0.879</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HM3</td>
<td></td>
<td></td>
<td></td>
<td>0.870</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HM2</td>
<td></td>
<td></td>
<td></td>
<td>0.868</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-efficacy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.767</td>
<td></td>
</tr>
<tr>
<td>SE3</td>
<td></td>
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<td></td>
<td></td>
<td>0.767</td>
<td></td>
</tr>
<tr>
<td>SE4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.674</td>
<td></td>
</tr>
<tr>
<td>SE1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.668</td>
<td></td>
</tr>
</tbody>
</table>

\(^a\)Rotation converged in six iterations

- Extraction method: Principal component analysis
- Rotation method: Varimax with Kaiser normalisation

### 4.5 Confirmatory factor analysis (measurement model)

The study further performed Confirmatory Factor Analysis (CFA) with 24 final loaded items that represent six factors namely, habit (H), hedonic motivation (HM), trust (T), self-efficacy (SE), behavioural intention (BI), adoption (A). The CFA measurement model projects the relationships between the unobserved and observed variables (Byrne, 2010). Measurement model relies on the assessment of its model fitness. According to McDonald and Ho (2002), the most frequently stated model fitness indices goodness of fit index (GFI), Adjusted goodness fit index (AGFI), Tucker-Lewis index (TLI), comparative fit index (CFI), normed fit index (NFI) and the non-normed fit index (NNFI). However, in reporting which index to include, one should not an emphasis on
common practices since some of the indices (for instance GFI) repeatedly are considered for historical reasons instead of their sophistication (Hooper et al., 2008). Various indices are important individually since all represent different aspects of model fitness (Crowley and Fan, 1997). Thus, there exists no consensus in literature for any single index of measuring model fitness. This leads to the necessity of reporting several combinations of indices. Kline (2005) strongly suggested the combination of chi-square test, the root mean square error of approximation (RMSEA), the CFI and the standardised root mean square residual (SRMR). These indices are preferred over other indices since they are most insensitive to sample size, misleading and parameter estimates. Following Kline (2005) recommendation, Table 5 presents the goodness of fit indices for our final hypothesised model.

<table>
<thead>
<tr>
<th>Indices</th>
<th>Final measurement model</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$(df)</td>
<td>269.903 (210)**</td>
</tr>
<tr>
<td>CMIN/df</td>
<td>1.285</td>
</tr>
<tr>
<td>GFI</td>
<td>0.888</td>
</tr>
<tr>
<td>AGFI</td>
<td>0.859</td>
</tr>
<tr>
<td>TLI</td>
<td>0.943</td>
</tr>
<tr>
<td>CFI</td>
<td>0.972</td>
</tr>
<tr>
<td>RMSEA (P-Close)</td>
<td>0.040 (0.889)</td>
</tr>
<tr>
<td>SRMR</td>
<td>0.050</td>
</tr>
</tbody>
</table>

Source: Authors' estimation

Overall, the outcomes of our goodness of fit indices suggested that the studied six-factor model fits the data very well. In our final measurement model, chi-square is significant indicating the difference between hypothesised and actual model. For models with 75 to 200 cases, the chi-square test is a reasonable measure of fit but for models with more cases, the chi-square is almost always statistically significant (Tanaka, 1987). Due to the sensitivity of Chi-Square with sample size, Kline (2005) suggested that the value of chi-square should be divided by the degrees of freedom in order to get the goodness of fit. This phenomenon is also called normed chi-square (NC) or CMIN/DF value. Tabachnik and Fidell (2007) provided the threshold of less than 2 for CMIN/DF value. In our case, it is 1.285 and fits the goodness of fit criterion. Moreover, the value of goodness fit index (GFI = 0.888) is more than the recommended value $\geq 0.85$ (Hu and Bentler, 1999). Similarly, the value of adjusted goodness fit index (AGFI = 0.859) is greater than the threshold value of $\geq 0.80$ (Hu and Bentler, 1999). The value of Tucker-Lewis index (TLI = 0.943) which is greater than the cutoff value $\geq 0.90$ (Hu and Bentler, 1999). Furthermore in supporting minimum discrepancy result with other sophisticated fit indices, our comparative fit index (CFI = 0.972) is above the excellent model fitness level of $> 0.95$ and higher than the traditional level of 0.90 (Hu and Bentler, 1999). The root mean square error of approximation (RMSEA = 0.040) is lower than the recommended level of 0.07 (Steiger, 2007). Our standardised root mean square residual (SRMR = 0.050) is also considerably smaller than the 0.08 value (Hu and Bentler, 1999) that is considered favourable for indicating model fitness. These fit indices suggested that our data fit very well with our model. It should also be noted that our final model has included numerous
correlated error terms within a factor. The error correlation in our measurement model is
done in the way that is accepted by prior researchers and correlation of error is not
performed among different factors (Byrne et al., 1989).

In contrast with Cronbach’s alpha, the composite reliability is considered an
improved measure of ensuring construct validity which measures the overall reliability of
a collection of heterogeneous but similar items (Lin and Lee, 2004; Fornell and Larcker,
1981). We analysed both measures to ensure construct validity. Table 6 presents the
results of the construct and convergent validity including Cronbach’s alpha ($C_\alpha$),
composite reliability (CR) of scale and average variance explained (AVE). The values of
$C_\alpha$ and CR for all six variables are above the threshold level of 0.7 representing above
fair construct validity (Afshan and Sharif, 2016; Sharif and Bukhari, 2014; Ali and Raza,
2015; Ali and Raza, 2017). Similarly, values of AVE are also exhibiting good validity of
constructs in which all the values are above 0.5. Overall, the results indicate an
appropriate measurement model (Molina et al., 2007).

Table 6  Cronbach’s alpha ($C_\alpha$), Composite Reliability (CR) and Average Variance Explained (AVE)

<table>
<thead>
<tr>
<th>Constructs</th>
<th>$C_\alpha$</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>0.89</td>
<td>0.90</td>
<td>0.69</td>
</tr>
<tr>
<td>A</td>
<td>0.82</td>
<td>0.82</td>
<td>0.74</td>
</tr>
<tr>
<td>BI</td>
<td>0.84</td>
<td>0.84</td>
<td>0.64</td>
</tr>
<tr>
<td>H</td>
<td>0.91</td>
<td>0.91</td>
<td>0.73</td>
</tr>
<tr>
<td>HM</td>
<td>0.92</td>
<td>0.92</td>
<td>0.75</td>
</tr>
<tr>
<td>SE</td>
<td>0.87</td>
<td>0.87</td>
<td>0.63</td>
</tr>
</tbody>
</table>

Source: Authors’ estimation

The structural model indicates the association between unobserved variables (Byrne,
2010). Table 7 shows the results of our structural model using SEM. The structural model
also holds a good fit assessed by CMIN/DF = 1.390; GFI = 0.875; AGFI = 0.851;
TLI = 0.937; CFI = 0.962; RMSEA (P-Close) = 0.04(0.65) and SRMR = 0.06. The reported fit indices exceeded their recommended threshold and exhibited good model
fitness (Hu and Bentler, 1999; Kline, 2004; Steiger, 2007).

Table 7  SEM Model fit indices

<table>
<thead>
<tr>
<th>Indices</th>
<th>Final measurement model</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$ (df)</td>
<td>297.396 (214)***</td>
</tr>
<tr>
<td>CMIN/df</td>
<td>1.390</td>
</tr>
<tr>
<td>GFI</td>
<td>0.875</td>
</tr>
<tr>
<td>AGFI</td>
<td>0.851</td>
</tr>
<tr>
<td>TLI</td>
<td>0.937</td>
</tr>
<tr>
<td>CFI</td>
<td>0.962</td>
</tr>
<tr>
<td>RMSEA (P-Close)</td>
<td>0.047 (0.659)</td>
</tr>
<tr>
<td>SRMR</td>
<td>0.06</td>
</tr>
</tbody>
</table>

Source: Authors’ estimation
The statistical significance of all determinants was projected to establish the validity of the hypothesised regression paths. Table 8 shows the results of SEM regression paths, standardised regression weights, standard errors, critical ratios, probability values and remarks of the hypothesis. The results suggested the positive significant impact of hedonic motivation (HM) on trust (T). Along with this, hedonic motivation (HM), trust (T), self-efficacy (SE) and habit (H) have a positive and significant impact on behavioural intention (BI). Finally, results revealed that habit (H) and behavioural intention (BI) have a significant and positive impact on the user’s intention to adopt internet banking (A).

Table 8  SEM hypothesis testing

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Hypothesised path</th>
<th>Path coefficient</th>
<th>S.E</th>
<th>C.R</th>
<th>P-Value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a</td>
<td>BI ← H</td>
<td>0.497</td>
<td>0.093</td>
<td>5.344</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>H1b</td>
<td>A ← H</td>
<td>0.745</td>
<td>0.146</td>
<td>5.102</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>H2a</td>
<td>BI ← HM</td>
<td>0.154</td>
<td>0.049</td>
<td>3.142</td>
<td>0.002</td>
<td>Significant</td>
</tr>
<tr>
<td>H2b</td>
<td>T ← HM</td>
<td>0.140</td>
<td>0.045</td>
<td>3.111</td>
<td>0.002</td>
<td>Significant</td>
</tr>
<tr>
<td>H3</td>
<td>BI ← T</td>
<td>0.212</td>
<td>0.090</td>
<td>2.355</td>
<td>0.018</td>
<td>Significant</td>
</tr>
<tr>
<td>H4a</td>
<td>BI ← SE</td>
<td>0.250</td>
<td>0.099</td>
<td>2.525</td>
<td>0.011</td>
<td>Significant</td>
</tr>
<tr>
<td>H4b</td>
<td>T ← SE</td>
<td>0.173</td>
<td>0.144</td>
<td>1.201</td>
<td>0.236</td>
<td>Not-Significant</td>
</tr>
<tr>
<td>H5</td>
<td>A ← BI</td>
<td>0.372</td>
<td>0.126</td>
<td>2.952</td>
<td>0.005</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Source: Authors’ estimation

This indicated that unit increase in the standard deviation of (HM) will increase (T) by 0.140 unit of standard deviations. On the other hand, a unit increase in the standard deviation of (HM), (T), (SE) and (H) will increase the standard deviation of (BI) by 0.154, 0.212, 0.250 and 0.497 units, respectively. Lastly, (H) and (BI) have a unit increase in the standard deviation will increase in the standard deviation of (A) by 0.745 and 0.372 units separately. Concluding the facts of these outcomes, it is established that hypotheses suggesting the influence of hedonic motivation, trust and habit on behavioural intention and then the influence of habit and behavioural intention on adoption of internet banking are supported in the present study.
5 Discussion and managerial implication

The present research studied the factors of and their effects on the user’s intention to adopt internet banking in Pakistan. By incorporating various theories, the study strives to examine the role of hedonic motivation, trust, self-efficacy, habit and behavioural intention in the acceptance of internet banking of the country. The results concluded the significance of all the variables in the adoption of IB in Pakistani scenario. Hedonic motivation ($\beta = 0.154$, $p < 0.002$) was found to have a positive significant effect on BI and a positive and significant impact on T ($\beta = 0.140$, $p < 0.002$). This established relationship imitated that the probability of adoption of internet banking will enhance between consumers who understand that spending time on IB is pleasurable, enjoyable and entertaining. In Pakistan, using internet banking might exemplify an added value in the form of modernism and novelty for the citizens there which, gives to the intrinsic motivation of expending such channels. Riffai et al. (2012) and Curran and Meuter (2007) have essentially admitted the dynamic role of intrinsic motivation in forecasting behavioural intention. Moreover, client trust in internet banking was established to be intensely predicted by the help of hedonic motivation. Hwang and Kim (2007) and Akhlaq and Ahmed (2013) concluded regarding the main part of client’s feelings and emotion in making their trust views to the inventive system.

Trust is the second factor that helps to predict internet banking. Pakistani customers are extra motivated to accept internet banking if they identify internet banking as a reliable and trustworthy network to get banking services. Customers were observed in giving a substantial consideration for the features associated with trust so as to support their decision to use such profound services, i.e. online banking transaction (Curran and Meuter, 2005; Gefen et al., 2003). The results are also consistent with the past studies (Akhlaq and Ahmed, 2013; Riffai et al., 2012).

The habit was verified in the present study as a positive and significant factor of both behavioural intention and adoption of internet banking. The majority of respondents in the present study were genuine adopters. So, their habit of using internet banking plays a vital role in expediting their actual behaviour towards internet banking as well as increase motivation to use such system in the future. These findings were consistent with the Venkatesh et al. (2012) who claimed and confirmed that habit as a vital predictor of customer behaviour and intention.

Self-efficacy is another factor that helps in predicting behavioural intention. This means that Pakistani customers, who consider their aptitude to efficiently conduct internet banking services, have more intention of using this technology as well as extra inspired to accept it in the future. The results of self-efficacy are consistent and supported by the prior literature of internet banking (Zhou, 2012; Al-Somali et al., 2009).

5.1 Managerial implication

This study provides an empirical framework that helps researchers to understand the drivers of consumers’ attitude and intention to use internet banking, and consumers’ perceptions regarding hedonic motivation, habit, self-efficacy and trust. Understanding customers’ motivations and limitations to use internet banking is of major importance in e-banking for making adequate strategic, technological and marketing decisions to increase customer satisfaction, trust and adoption of internet banking. Therefore, for researchers, this study provides a basis for further refinement of individual models of
acceptance, as a starting point for future research. For practitioners, understanding the key constructs in the proposed research model is crucial to design, refine and implement internet banking services that yield high consumer acceptance. Internet banking service providers in Pakistan should continue informing consumers about the usefulness, convenience and more immediate advantages of the service (short term) and improving whenever possible channel enjoyment, fun and user experience over usability.

This study provides guidelines to the banks on how to increase the acceptance of internet banking among their customers. First, the banks should give attention to the self-efficacy factor as most of the customers’ decision to use internet banking is affected by this factor. In order to cope up with this problem, the banks need to improve their customers’ skills with respect to internet banking usage. This can be done by giving in-branch training, establishing facilitation centres which can guide the customers from initial steps to complex steps, i.e. from log-in to complete the transactions using internet banking. Any query or difficulty should be entertained there and then. By doing this, it will help the customers to develop their abilities and skills on internet banking and understanding that IB makes life easy. Once the confidence of the customer is the establishment, this results in developing their intentions and trust in internet banking (Compeau and Higgins, 1995).

Second, the most important factor which affects the customer’s intentions to use internet banking is trust. Banks can build trust among their customers by improving their quality and performance of internet banking and change those policies which affect the structural assurance; this increases the customers trust in such technology (Yousafzai et al., 2010). However, the other secondary means from which the trust can be built are a timely flow of information by the banks, by providing the customers with testimonials on the user friendliness of the technology. In addition, the information on user friendliness of internet banking should be printed on bank statements or displayed on the walls of the banks. The banks, in order to gain the trust of their customers, should consistently send positive messages on internet banking.

Third, the bank should introduce the element of playfulness on the usage of internet banking as this will help to increase the hedonic motivation. The customers who registered to IB or uses it again and again should be rewarded with some incentive. This would change the customers’ habit and shapes the customer’s behaviour. Moreover, the banks should change their internet banking screens and should switch to the more innovative interface. These steps will increase the hedonic values and forms the positive attitude of the customer related to internet banking. These results are suggestions for the banks to take interest on these factors as this will help to increase the customer intention to use internet banking.

5.2 Research limitation and future implication

One of the limitations of this study is utilising random sample as subjects. We here put forward the replication of random subjects with old banking customers. This will provide a larger population of banking users overcoming the issue of generalisability. Second, our study is conducted in Pakistan. The outcomes may not hold suitable to users of other countries since they possess diverse corporate practices, the level of technology acceptance, customer’s exposure and infrastructures. The reason is different countries face different issues; constructs significant in this study may not be critical to others. Finally, a more detailed understanding of the constructs and dimensions of internet
banking is required. The need of more researches with a thorough analysis of the studied field would be highly fruitful since very little work is done in the field of internet banking in Pakistan.

References


A case of developing country


A case of developing country


Appendix

Hedonic Motivation (Venkatesh et al., 2012)
HM1: Using internet banking is fun
HM2: Using internet banking is enjoyable
HM3: Using internet banking is entertaining

Habit (Venkatesh et al., 2012)
H1: The use of internet banking has become a habit for me
H2: I am addicted to use internet banking
H3: I must use internet banking
H4: Using internet banking has become natural to me

Behavioural Intention (Venkatesh et al., 2012)
BI1: I intend to use internet banking in the future
BI2: I will always try to use internet banking in my daily life
BI3: I plan to use internet banking in future
BI4: I predict I would use internet banking in the future

Trust (Gefen et al., 2003)
T1: I believe that internet banking is trustworthy
T2: I trust internet banking
T3: I do not doubt the honesty of internet banking
T4: Even if not monitored, I would trust internet banking to do the job right
T5: Internet banking has the ability to fulfil its task

Self-Efficacy (Compeau and Higgins, 1995)
SE1: I could complete a transaction using internet banking if there was no one around to tell me what to do
SE2: I could complete a transaction using internet banking if I could call someone for help if I got stuck
SE3: I could complete a transaction using internet banking if I had a lot of time to complete the job I started
SE4: I could complete a transaction using internet banking if I had never used a system like it before

Adoption (Venkatesh et al., 2012)
A1: I use internet banking for balance inquiries and for download bank statements
A2: I use internet banking for fund transfers
A3: I use internet banking for requesting cheque book or bank certificates
A4: I use internet banking for paying bills